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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,917	07/24/2006	Masato Sasaki	MAT-8880US	8177

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EXAMINER	
CARTON, MICHAEL	
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3744	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,917	SASAKI ET AL.	
	Examiner	Art Unit	
	MICHAEL CARTON	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *7/24/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilman (US Patent No. 2808093) in view of Masaaki (Japan Publication No. 07-091594).

With respect to claim 1, Gilman discloses storing frozen products in a cold-insulating container (see fig 1) the cold-insulating container including a plurality of individual cold-insulating panels 11, 12, 16, 17 (fig 1), each of said panels including a solid heat insulating material (column 2 lines 22-26); and loading the cold-insulating container in a vehicle that is maintained at a temperature above a freezing temperature of the frozen products (column 1 lines 36-40). Gilman does not specifically disclose a gas impermeable jacket around the solid heat insulating material, wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket. Masaaki discloses a gas impermeable jacket around the solid heat insulating material (fig 1 description), wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket (see abstract CONSTITUTION section). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gilman with a gas impermeable jacket around the solid heat insulating material, wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket as taught by

Masaaki for the purpose of increasing the thermal insulation of the container while also sealing any odors or moisture inside the container keeping the contents in a more protected state.

With respect to claim 2, Masaaki discloses the vacuum heat-insulating material is structured so that a core material made by compression-molding (paragraph 49 detailed description) a fiber material (paragraph 39 detailed description) is covered with a gas-barrier jacket material 2 (fig 1), and an inside covered with the jacket material is depressurized for vacuum encapsulation 7 (fig 4) (paragraph 36 detailed description).

With respect to claim 3, Masaaki discloses the vacuum heat-insulating material has a thickness ranging from 2 to 20 mm inclusive (paragraph 62 example).

With respect to claim 4, Masaaki discloses the vacuum heat-insulating material has an initial thermal conductivity up to 0.02 W/mK (paragraph 63 example). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gilman with insulation as taught by Masaaki for the purpose of preserving products in the container with more modern insulation that is capable of storing products for a substantially longer amount of time.

2. Claims 1, 7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Gilman (US Patent No. 2808093) and further in view of Masaaki (Japan Publication No. 07-091594).

With respect to claim 1, Purdum discloses a cold insulating container (seen in fig 1), with a plurality of insulating panels 120, 112 (fig 2) and a vacuum insulation (column 9 lines 13-18). Pudum does not specifically disclose loading the container into a non-refrigerated vehicle for delivery. Gilman discloses storing frozen products in a cold-insulating container (see fig 1) the

cold-insulating container including a plurality of individual cold-insulating panels 11, 12, 16, 17 (fig 1), each of said panels including a solid heat insulating material (column 2 lines 22-26); and loading the cold-insulating container in a vehicle that is maintained at a temperature above a freezing temperature of the frozen products (column 1 lines 36-40). Gilman does not specifically disclose a gas impermeable jacket around the solid heat insulating material, wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket. Masaaki discloses a gas impermeable jacket around the solid heat insulating material (fig 1 description), wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket (see abstract CONSTITUTION section). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Purdum with a gas impermeable jacket around the solid heat insulating material, wherein a partial vacuum is between the solid heat insulating material and the gas-impermeable jacket as taught by Masaaki, and modifying Purdum by loading the container into a non-refrigerated vehicle as taught by Gilman for the purpose of increasing the thermal insulation of the container while also sealing any odors or moisture inside the container keeping the contents in a more protected state and not require a refrigerated vehicle to transport frozen goods saving on transportation costs.

With respect to claim 7, Purdom discloses that by "bracketing" the target temperature range between the phase change temperatures of the two materials, the latent heat of transformation associated with each material's phase change is advantageously utilized to maintain the temperature of the payload within the target temperature range (column 5 lines 19-23). Purdum further discloses in column 6 lines 20-33 that the target temperature can vary to any limitations imposed by specific application. Purdum does not specifically disclose the container

including a phase change material with a melting point target temperature between -27 and -18 deg. Celsius. However, based on what is disclosed, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Purdum by including a melting point target temperature between -27 and -18 deg. Celsius, bracketing that range, and having the capability of obtaining the specified melting point, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With respect to claim 9, Purdum discloses the method of delivering frozen products except for the container having an internal capacity of at least 70L. It would have been an obvious matter of design choice to modify Purdum so that the container has an internal capacity of at least 70L, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose, 105 USPQ 237 (CCPA 1955).*

With respect to claim 10, Purdum discloses a protective case for housing the cold-insulating container (fig 1) is provided, and the frozen products are delivered while the cold-insulating container is housed in the protective case (column 4, lines 51-67).

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Gilman (US Patent No. 2808093) in view of Masaaki (Japan Publication No. 07-091594) in further view of Bane (US Patent No. 5441170).

With respect to claim 5, Purdum does not specifically disclose the cold insulating container is capable of housing frozen products at 0 deg. C for at least two hours, however Masaaki discloses the method of delivering frozen products of claim 1 wherein the cold-

insulating product has outstanding insulation efficiency (paragraph 84 effect of invention), and Purdum is capable of housing frozen products at least at a predetermined percentage with respect to an internal capacity thereof. Masaaki does not state exact temperatures that are capable of being maintained. Bane, however, discloses maintaining a storage temperature using dry ice, or cubes of conventional ice as the cold storage agent (column 3 lines 47-50). Conventional ice has a core temperature of 0 Celsius and dry ice has a temperature of -78.5 Celsius. Using dry ice as taught by Bane with the insulating properties as taught by Masaaki would be well capable of maintaining 0 Celsius for two hours. It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by maintaining a temperature of up to 0 Celsius for two hours as taught by Bane for the purpose of transporting goods in a frozen state to maintain freshness.

With respect to claim 8, Purdum does not specifically disclose the cold-insulating container is capable of housing at least lkg of the cold storage agent per internal capacity of 50 I, and maintaining an average inside temperature of up to 0 deg C for at least 10 hous. Masaaki discloses the method of delivering frozen products of claim 1 wherein the cold-insulating container is capable of housing at least lkg of the cold storage agent per internal capacity of 50 L (paragraph 63), but does not disclose maintaining an average inside temperature up to 0 °C for at least 10 hours. Masaaki does not state exact temperatures that are capable of being maintained. Bane, however, discloses maintaining a storage temperature using dry ice, or cubes of conventional ice as the cold storage agent (column 3 lines 47-50). Conventional ice has a core temperature of 0 Celsius and dry ice has a temperature of -78.5 Celsius. Using dry ice as taught by Bane with the insulating properties as taught by Masaaki would be well capable of

maintaining 0 Celsius for at least 10 hours. It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by maintaining a temperature of up to 0 Celsius for ten hours as taught by Bane for the purpose of transporting goods in a frozen state to maintain freshness.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum in view of Gilman (US Patent No. 2808093) in view of Masaaki (Japan Publication No. 07-091594) in further view of Konarski (US Patent No. 6519968).

With respect to claim 6, Purdum, discloses all claimed elements in the method of delivering frozen products of claim 1 except for a cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery. Konarski discloses a cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery (column 3 lines 31-35). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by adjusting the amount of cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery at taught by Konarski for the purpose of ensuring the frozen product arrives to its destination in a frozen state.

4. Claims 11-12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Gilman (US Patent no. 2808093) in view of Masaaki (Japan Publication No. 07-091594) in further view of Casutt (US Patent No. 4129248).

With respect to claim 11, Purdum discloses the method of delivering frozen products wherein a collapsible, cold insulating container comprising four peripheral walls; a bottom face; and an openable and closable lid 110 (fig 1), wherein each of the members is formed of a sheet

material (column 8 lines 66-67 – column 9 lines 1-6), Purdum does not specifically disclose the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. A planar vacuum heat-insulating material therein, and the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. Casutt discloses the respective members forming a box in use, and the respective members overlapping with one another not in use (fig 6). Masaaki discloses a planar vacuum heat-insulating material (description of drawing 1). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with the cold-insulating container being collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use, and a planar vacuum heat-insulating material as taught by Casutt and Masaaki for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

With respect to claim 12, Purdum discloses the method of delivering frozen products wherein a collapsible cold-insulating container (fig 1) comprising: four peripheral walls connected into a square shape so as to be foldable one another 110 (fig 1); two lids connected to two opposed ones of the peripheral walls along upper side edges thereof so as to be foldable (see fig 1 below); and two bottom faces that are connected to the two peripheral walls connected to the lids (see fig 1 below), along the lower side edges thereof, so as to be foldable (see fig 1 below). Purdum does not disclose the container has a collapsible structure, wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not

in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another. Each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable. Casutt discloses the container has a collapsible structure (fig 6) wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box (column 2 lines 5-9), and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another (figs 5, 6). Masaaki discloses each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable (fig 3, 4). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the container has a collapsible structure

wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another, and each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable as taught by Casutt and Masaaki, respectively, for the purpose having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

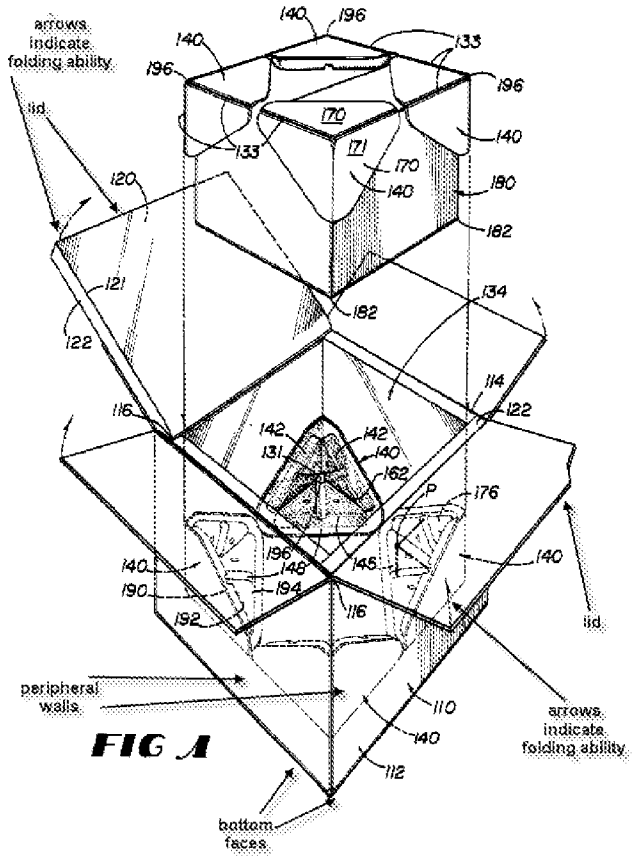

FIG 4

With respect to claim 15, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes a flexible bottom sheet for covering an entire external surface of the two bottom faces is attached along lower side edges of the four peripheral walls (column 12 lines 41-50). Purdum does not disclose when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls. Casutt discloses when the cold-insulating container is collapsed, the bottom faces 2, 3 (fig 5) are folded inwardly of the peripheral walls. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum, so when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls as taught by

Casutt for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume.

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Gilman (US Patent No. 2808093) in view of Masaaki (Japan Publication No. 07-091594), in view of Casutt (US Patent No. 4129248), in further view of Kutun (US Publication No. 2004/0118854).

With respect to claim 13, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes on one of the lids, an engaging flap along a side edge thereof engaging with an other lid (see fig 1 below); and on the other lid, a engaging flap, wherein turning the two lids into a closed position matches side edges of both lids and brings the engaging flap on the one lid into contact with the other lid to engage each other (see fig 1 below). Purdum does not disclose the flaps engaging with hook and loop fasteners, rather with tape. Kutun discloses the flaps engage with hook and loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the flaps engage with hook and loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

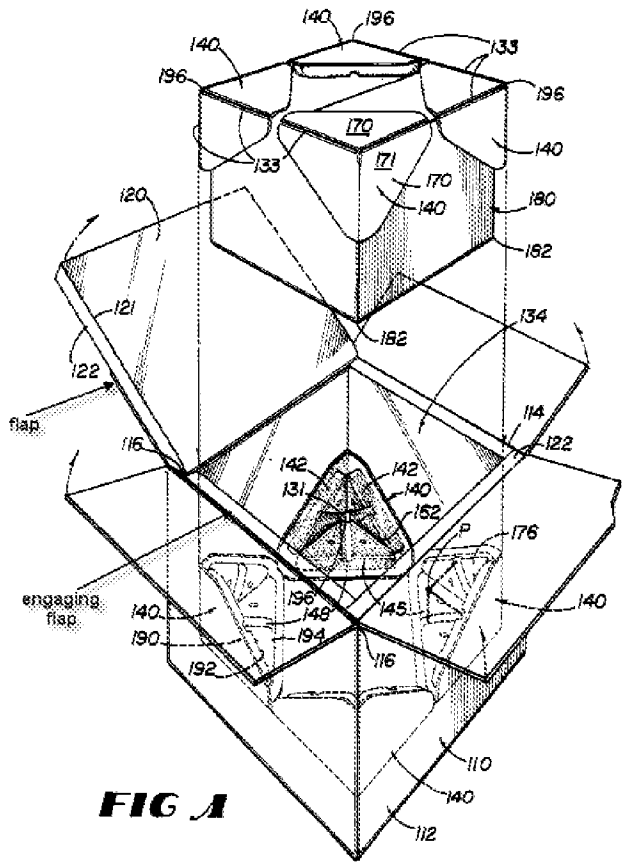

FIG 4

With respect to claim 14, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes on each of the two foldable peripheral walls, a flexible engaging flap along an upper side edge thereof so that the flap is urged upwardly rather than laterally (see fig 1 below). Purdum does not disclose on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other, the fasteners being hook and loop fasteners. Kutun discloses on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make

contact therewith so that the fasteners and corresponding ones engage with each other. The fasteners being flexible hook- and-loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other, the fasteners being flexible hook- and-loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

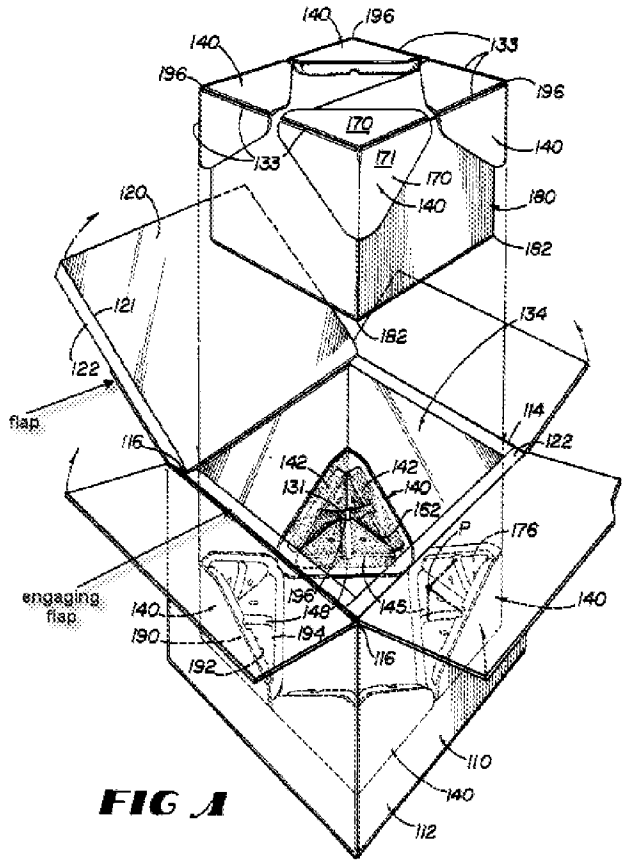

FIG 4

6. Claims 16-17, 20-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Casutt (US Patent No. 4129248) in further view of Masaaki (Japan Publication No. 07-091594).

With respect to claim 16, Purdum discloses a collapsible, cold insulating container comprising four peripheral walls; a bottom face; and an openable and closable lid 110 (fig 1), wherein each of the members is formed of a sheet material (column 8 lines 66-67 – column 9 lines 1-6), Purdum does not disclose the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. A planar vacuum heat-insulating material therein, and the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. Casutt discloses the respective members forming a box in use, and the respective members overlapping with one another not in use (fig 6). Masaaki discloses a planar vacuum heat-insulating material (description of drawing 1). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with the cold-insulating container being collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use, and a planar vacuum heat-insulating material as taught by Casutt and Masaaki for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

With respect to claim 17, Purdum discloses a collapsible cold-insulating container (fig 1) comprising: four peripheral walls connected into a square shape so as to be foldable one another

110 (fig 1); two lids connected to two opposed ones of the peripheral walls along upper side edges thereof so as to be foldable (see fig 1 below); and two bottom faces that are connected to the two peripheral walls connected to the lids (see fig 1 below), along the lower side edges thereof, so as to be foldable (see fig 1 below). Purdum does not disclose the container has a collapsible structure, wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another. Each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable. Casutt discloses the container has a collapsible structure (fig 6) wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box (column 2 lines 5-9), and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another (figs 5, 6). Masaaki discloses each of the peripheral walls, lids,

and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable (fig 3, 4). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the container has a collapsible structure wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another, and each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable as taught by Casutt and Masaaki, respectively, for the purpose having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

With respect to claim 20, Purdum discloses a flexible bottom sheet for covering an entire external surface of the two bottom faces is attached along lower side edges of the four peripheral

walls (column 12 lines 41-50). Purdum does not disclose when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls. Casutt discloses when the cold-insulating container is collapsed, the bottom faces 2, 3 (fig 5) are folded inwardly of the peripheral walls. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls as taught by Casutt for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume.

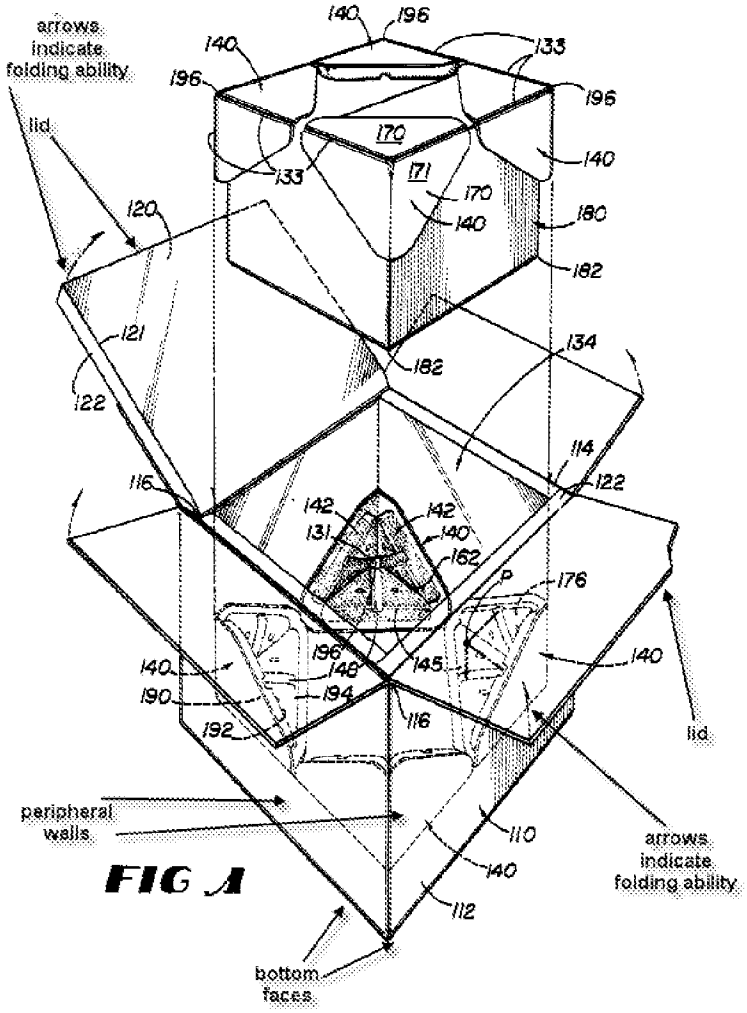

FIG 4

With respect to claim 21, Masaaki discloses the vacuum heat-insulating material is structured so that a core material made by compression-molding (paragraph 49 detailed description) a fiber material (paragraph 39 detailed description) is covered with a gas-barrier jacket material 2 (fig 1), and an inside covered with the jacket material is depressurized for vacuum encapsulation 7 (fig 4) (paragraph 36 detailed description).

With respect to claim 22, Masaaki discloses the vacuum heat-insulating material has a thickness ranging from 2 to 20 mm inclusive (paragraph 62 example).

With respect to claim 23, Masaaki discloses the vacuum heat-insulating material has an initial thermal conductivity up to 0.02 W/mK (paragraph 63 example).

With respect to claim 24, Purdum discloses all claimed elements except for a cold storage agent having a melting point ranging from -27 to -18 Deg. Celsius inclusive housed in the container. Purdum does however disclose that by "bracketing" the target temperature range between the phase change temperatures of the two materials, the latent heat of transformation associated with each material's phase change is advantageously utilized to maintain the temperature of the payload within the target temperature range (column 5 lines 19-23). Purdum further discloses in column 6 lines 20-33 that the target temperature can vary to any limitations imposed by specific application. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a melting point target temperature between -27 and -18 deg. Celsius, bracketing that range, and having the capability of obtaining the specified melting point, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With respect to claim 25, Purdum discloses maintaining a desired temperature for a period of time (column 9 lines 35-40). Purdum is capable of maintaining the desired temperature for the desired time range as he also discloses the target temperature can be altered to meet the requirements (column 7 lines 9-19). Masaaki discloses the cold-insulating container is capable of housing at least lkg of the cold storage agent per internal capacity of 50 L (paragraph 63), but does not disclose maintaining an average inside temperature up to 0 °C for at least 10 hours.). It would be obvious to one ordinarily skilled in the art at the time the invention was made to

modify Purdum so that he would maintain an average inside temperature up to 0 °C for at least 10 hours as taught by Masaaki for the purpose of controlling the temperatures perishable frozen type materials during transit for at least 72 hours.

With respect to claim 26, Purdum discloses the claimed invention except for the cold-insulating container having an internal capacity of at least 70L. Purdum does not disclose the volume of the container. It would have been an obvious matter of design choice to modify Purdum to have an internal capacity of at least 70L, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose, 105 USPQ 237 (CCPA 1955).*

With respect to claim 27, Purdum discloses at least one of the sheet material, the engaging flaps, and the bottom face sheet is made of a waterproof cloth (column 12 lines 41-50).

With respect to claim 28, Purdum discloses additional strengthening is provided on at least one face facing to an outside in use or not in use, among faces of the peripheral walls, lids, and bottom faces (column 11 lines 7-25).

With respect to claim 29, Purdum discloses a cold-storage agent holder for holding the cold-storage agent therein on an inner surface of at least one of the lids, peripheral walls, and bottom faces 140 (fig 1).

With respect to claim 30, Purdum discloses a flexible inner cover inside of the lids, wherein the inner cover is attached along an upper side edge of one of the peripheral walls connected to one of the lids, and the inner cover is not smaller than a length from the upper side edge to a bottom edge of an inner surface of a facing one of the peripheral walls (column 11 lines 7-25).

With respect to claim 31, Purdum discloses a cold storage agent holder for holding the cold-storage agent therein on an inner surface of at least one of the lids, peripheral walls, bottom faces, and the inner cover140 (fig 1).

With respect to claim 32, Purdum discloses in each of the two lids and the two bottom faces, a length from the lid to the facing bottom face thereof and a length from the bottom face to the facing lid thereof are smaller than a height of the peripheral walls (see fig 7 below).

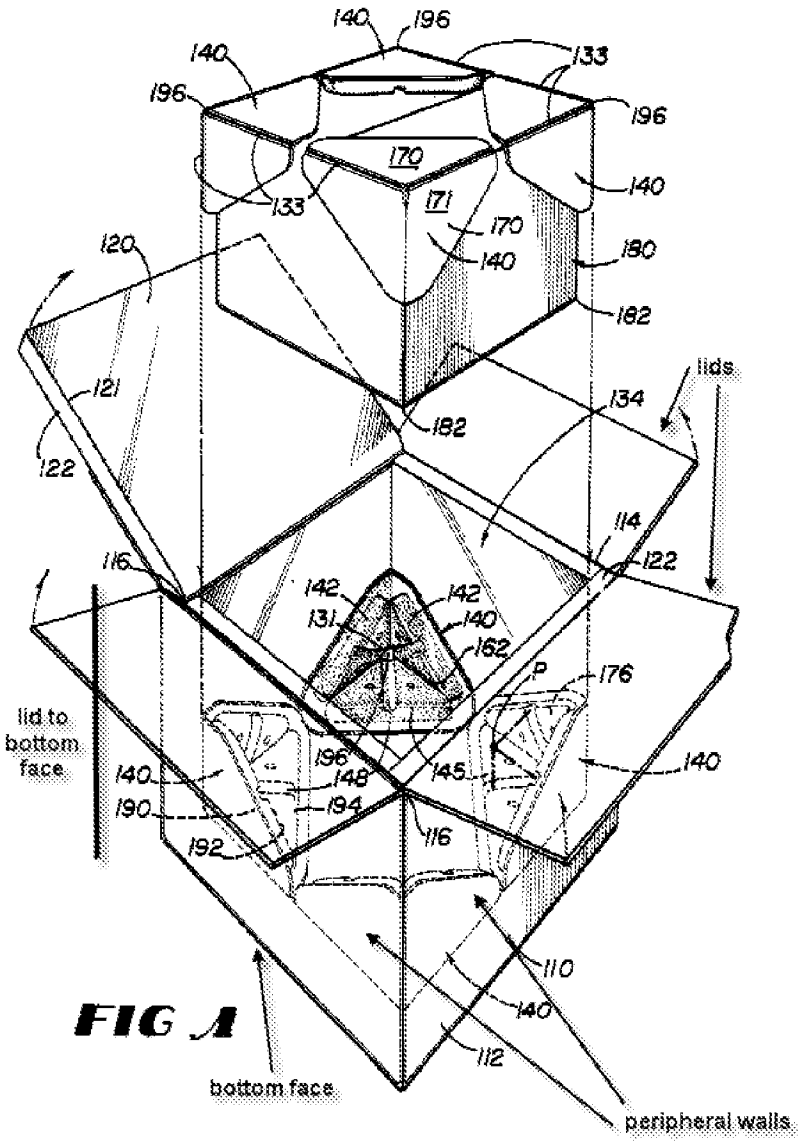

FIG 4

With respect to claim 33, Purdum discloses all claimed elements except for a protective case for housing the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use. Casutt discloses a folding box (fig 8) capable of being used as a protective case for housing

the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use (fig 8). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by making the container a folding box capable of being used as a protective case for housing the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use as taught by Casutt for the purpose of minimizing space occupied when shipping empty containers.

7. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in view of Casutt (US Patent No. 4129248) in further view of Kutun (US Publication No. 2004/0118854).

With respect to claim 18, Purdum discloses that on one of the lids, an engaging flap along a side edge thereof engaging with an other lid (see fig 1 below); and on the other lid, a engaging flap, wherein turning the two lids into a closed position matches side edges of both lids and brings the engaging flap on the one lid into contact with the other lid to engage each other (see fig 1 below). Purdum does not disclose the flaps engaging with hook and loop fasteners, rather with tape. Kutun discloses the flaps engage with hook and loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the flaps engage with hook and loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

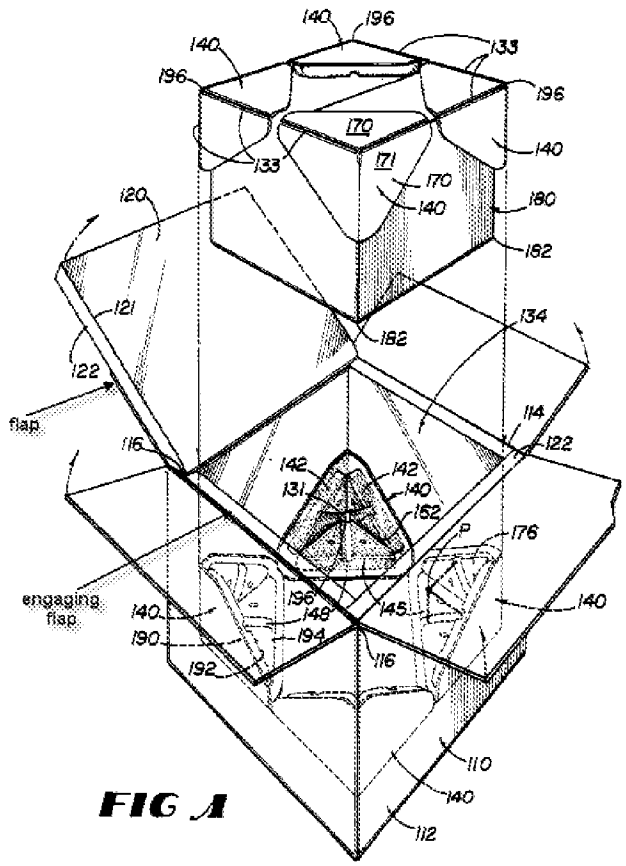

FIG 4

Response to Argument

Applicant's arguments filed 5/18/2009 have been fully considered but they are not persuasive in light of the new grounds of rejection.

8. With respect to arguments regarding rejections to claims 1-15, applicant argues the disclosed references fail to disclose loading a cold insulating container into a vehicle that is maintained at a temperature above the freezing temperature of the frozen products. Examiner points out that Purdum (US Patent No. 5899088) discloses shipping temperature sensitive materials in insulated boxes along with cooling agents (column 1 lines 15-22). Purdum additionally discloses addressing problems with shipping containers left on loading docks

(column 2 lines 12-19). Lastly, in column 2 lines 65-66 Purdum discloses maintaining a payload within a temperature range and a carrying container to receive the payload (column 3 lines 20-25). It is inherent that when dealing with shipping containers carrying a payload, the container will be shipped. Lastly, newly cited art, Gilman (US Patent No. 2808093) discloses an insulated container (see fig 1) disclosed in column 1 lines 35-40 as loaded into a non refrigerated truck for delivery. Gilman also discloses in column 3 lines 16-28 that the items inside the container are kept frozen, which is obviously at a temperature below the temperature of the non refrigerated vehicle.

With respect to claims 16-33, applicant argues the disclosed references fail to disclose a sheet material enveloping a planar vacuum heat insulating material. Examiner points out that Masaaki (Japan Publication No. 07-091594) discloses in fig 3 a sheet material, also described in paragraph 27 of the OPERATION section that is stated as a vacuum insulating body including a facial porous core material (abstract). The sheet material is further disclosed by element 2 in fig 1.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL CARTON whose telephone number is (571)270-7837. The examiner can normally be reached on Monday-Friday 7:30am - 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on (571)272-4834 or (571)272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C./
Examiner, Art Unit 3744

/Stephen Garbe/
Primary Examiner, TC 3700